



Parallel evolution of deformation textures and dislocation boundaries

Winther, Grethe

Publication date:
2017

Document Version
Publisher's PDF, also known as Version of record

[Link back to DTU Orbit](#)

Citation (APA):
Winther, G. (2017). *Parallel evolution of deformation textures and dislocation boundaries*.

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Parallel evolution of deformation textures and dislocation boundaries

Grethe Winther, Department of Mechanical Engineering, Technical University of Denmark

During plastic deformation of metals like aluminium, nickel and copper, deformation textures evolve in parallel with dislocation boundaries. The dislocation boundaries exhibit a preferred crystallographic alignment, which correlates with the crystallographic grain orientation. The focus is on the evolution of dislocation boundaries in the stable texture fibres, in particular after rolling but also tension and compression will be included. It is investigated to which extent the experimentally observed dislocation boundary alignment can be predicted by a combination of crystal plasticity and dislocation theory.